A

PROBATIONARY ESSAY

ON

STRICTURE OF THE RECTUM

AND

FISTULA IN ANO;

SUBMITTED,

BY THE AUTHORITY OF THE PRESIDENT AND HIS COUNCIL,

TO

THE EXAMINATION OF THE

Royal College of Surgeons of Edinburgh,

WHEN CANDIDATE FOR ADMISSION INTO THEIR BODY,

IN CONFORMITY

TO THEIR REGULATIONS RESPECTING THE ADMISSION OF ORDINARY FELLOWS.

BY

GEORGE HAMILTON BELL,

MEMBER OF THE ROYAL COLLEGE OF SURGEONS OF LONDON,

LATE RESIDENCY SURGEON, TANJORE.

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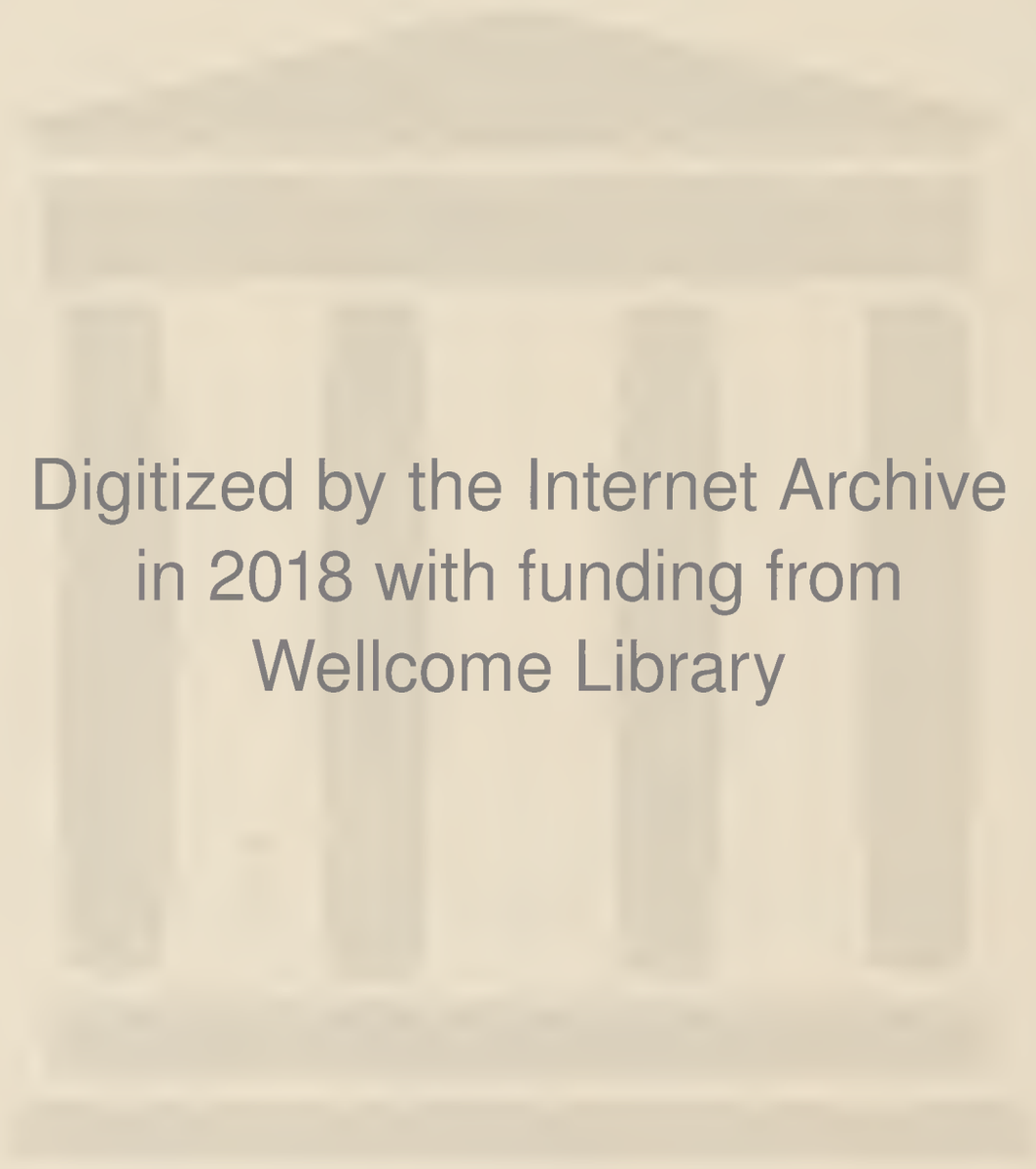

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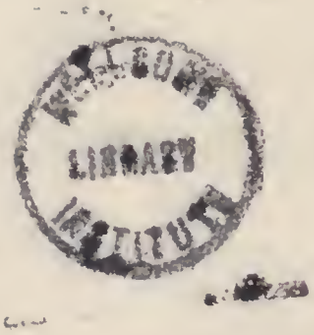

TO

CHARLES BELL, ESQ. F. R. S.

PROFESSOR OF PHYSIOLOGY, LONDON UNIVERSITY,

SURGEON TO THE MIDDLESEX HOSPITAL,

&c. &c. &c.

THIS ESSAY

IS

GRATEFULLY AND RESPECTFULLY INSCRIBED,

BY

THE AUTHOR.

ESSAY

ON

STRICTURE OF THE RECTUM,

AND

FISTULA IN ANO.

Morbid affections of the Rectum and Anus, belong to a class of diseases of frequent occurrence, and of considerable importance, whether we regard their effects on the patient, or the difficulties attending their treatment. It is not, of course, my present purpose to attempt a systematic disquisition;—but rather to offer a few practical observations on two of the disorders incidental to this part of the body—as forming a fit subject for the Probationary Essay required of me as a Candidate for admission to the Royal College of Surgeons. At the same time, the subject which I have chosen is one which it is impossible to treat, even in a cursory manner, without much professional discrimination;—a consideration which should perhaps have led me to select a different topic, had it not been, that in the course of my practice I have had many opportunities of treating diseases of this class. But, in stating the results of my own experience, I cannot but feel, that it becomes me to do so with great deference, when I call to mind that the Body for whose approbation this Essay is submitted, contains so many Members eminently skilful in the treatment of these and similar disorders.

Those, however, who have themselves overmastered the difficulties of their profession, are not the less likely, on that account, to regard with forbearance the efforts of their juniors, who, at a respectful distance, may aspire to follow their footsteps; and under that conviction, I have the less hesitation in submitting the following pages to their notice.

STRICTURE OF THE RECTUM.

This disease is generally seated at from one to two inches within the Anus. It may be the consequence of common inflammation, or may arise from *Scirrhus;* and so common is the latter cause, that it has obtained a distinct name—the *Scirrho-contracted Rectum.* Simple stricture may occur in individuals of any age; but scirrhus in this part, as in other parts of the body, does not usually commence until after the age of forty.

Generally speaking, stricture of the rectum consequent on inflammation is not soon discovered. Sometimes, indeed, it has not even been suspected, until the finger, in the progress of the operation for fistula, has been obstructed by it. The irritation at the lower end of the intestines produces an increased action in the whole canal, and the symptoms are ascribed to a chronic diarrhœa: there is distention and flatulency, with tenesmus and irregular action throughout the whole canal. The patient may be aware of an uneasy and burning sensation near the anus; but this appears to be merely the local effect of the looseness,—or, as there are generally piles in these cases, the frequent alvine calls are supposed to have made them more irritable than usual. There is also a weary pain in the buttocks, and around the anus; and sometimes there occurs a shooting pain, so sharp, that the patient describes it as forcing him to spring from his seat.

As the disease advances, what seemed diarrhœa subsides; the pain in the lower part of the rectum is less troublesome, and the patient thinks all is right. An opposite state of the bowels supervenes;—there is extreme constipation and great fecal accumulation,—there are painful spasms in the viscera of the pelvis, which will even extend throughout the whole intestines, producing severe bearing-down pains. Temporary relief is obtained by medicine, though with great pain in the rectum. Motions occasion bleedings from the anus, and the feces, when passed *formed*, are small and round like a child's, or flattened; while the bladder, sympathizing with the diseased gut, will become so much affected, as even to induce a belief in the patient's mind that the seat of disease is in that viscus.

With such symptoms the surgeon is induced to examine the rectum. The finger being oiled is slowly and carefully introduced, and when stricture exists, the obstacle will generally be found within the reach of the finger. Should the finger, notwithstanding the above symptoms, find no obstruction, it will be necessary to examine with the bougie. Here, as in sounding the urethra, it is indispensable to recollect the anatomy of the part: In introducing the rectum-bougie it must be borne in mind, that this gut, notwithstanding its name, is far from being straight—that, lying on the sacrum and os cocygis, it takes the full curve of those bones.

In this operation, after having passed the inner sphincter, should the instrument be pushed directly upwards, it will be stopped by the prostate gland. It is, therefore, necessary that the handle should be brought forward towards the perinœum; and, by advancing the bougie in that position, the point will be made to reach the hollow of the sacrum. The size of the bougie must depend on the state of the parts.

The irritation may be such as to render the use of so large an instrument as might be wished inadmissible.*

Having freely opened the bowels, and washed out the lower end of the intestines with a glister, as large a bougie as may be thought advisable, having been oiled, softened in the hand, and bent so as to fit the concavity of the sacrum, must be very gently introduced; and if the proper shape have been given to it, and the parts be in a state of health, it may be passed almost to the top of the pelvis.

In the course of these preliminary examinations, it ought to be remembered, that obstruction to the passage of the instrument may be produced by disease of the prostate or bladder, by retroversion of the uterus, by hardened feces, or by a tumor in the abdomen. Indeed, when the obstruction is beyond reach of the finger, there are so many causes of deception, that much experience is necessary to render it safe to trust to the evidence, which sounding with a bougie may be supposed to give, of stricture.

When the instrument is found to be obstructed, it should be gently pressed onwards, so that if possible the impression of the stricture may be made on it.

The only forms of simple stricture which I have ever seen are,—

1. Where a circle of the gut has been equally contracted, so as to leave the remaining passage round.

2. Where inflammation has produced thickening on one side of the gut, leaving a flattened passage. And,

3. Where, as in the bridle stricture of the urethra, a band has been thrown across the canal.

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* I have frequently found it necessary to accustom the sphincter to the passage of a foreign substance, before I could venture to examine with the bougie in a satisfactory manner. A piece of soap rounded, of the size of the finger, and passed by the patient himself, for a few days, morning and evening, while sitting over warm water, is a very good preparative for the bougie.

Any one of these may make an impression on the bougie; but it is to be remembered, that the gut, in the neighbourhood of a stricture, becomes so much swelled and thickened, that a simple stricture may present all the character of a scirrhus: and gentleness and caution cannot be too strongly recommended; for severe fits of rigor are often the consequence of sounding with the bougie, and these have even been followed by an attack of fever.

Having satisfied ourselves that a stricture exists, our first object ought to be to allay inflammation. For this purpose, leeching and antimonials may be necessary, keeping the bowels open by the means least irritating to the patient's constitution. If we then have reason to believe that the disease is not carcinomatous, the cure may be attempted by gradually dilating the stricture with the bougie, continuing the most rigid attention to the patient's bowels and constitution. The best bougie is the metallic; and we must begin with one of a size which will cause no degree of violence, gradually increasing the size of the instrument as our success permits. Next to the metallic bougie, I prefer a common candle, the wax-composition bougie being apt to stick in the stricture, and cause irritation in its removal.

All violent purgatives must be avoided. If laxatives be required, castor oil, manna, sulphur, rhubarb, and ipecacuan, inf. sennæ cum tart. potassæ, and the like, will be found safest. Mild oleaginous lavements will be of the greatest service, and, if necessary, they should be thrown above the stricture by means of an elastic gum-tube. It will often be necessary to combine anodynes with the purgatives. By a perseverance in such a course of treatment, the cure may be calculated on, where the stricture is in the coats of the gut, and not complicated with scirrhus.

It has been recommended to use the knife in stricture of the rectum, when the bougie fails. The only case, however,

in which this seems advisable or safe is, when a ligamentous band passes across the gut. I have never seen the stricture in the walls of the intestine sufficiently free from surrounding swelling to admit of cutting, without danger of doing too much. The instrument to be used in dividing this bridle stricture should have only a very small portion of it prepared for cutting; it should be introduced flat on the finger, and the cutting edge turned on the stricture when it has reached it.

SCIRRHO-CONTRACTED RECTUM.

This is a most formidable disease, and very different in its nature from the simple stricture already described. We have here a specific morbid action to contend with, which, having commenced in the glandular structure in the neighbourhood of the anus, gradually includes the coats of the gut and surrounding parts, forming an obstruction, of greater or less extent, in the canal. This is truly a carcinomatous disease, with which it is often dangerous for the surgeon to interfere. The coats of the intestine, being included in the disease, have their functional powers destroyed, and the gut no longer admits of being dilated. Hence the risk of attempting a cure, as in simple stricture, by dilating with an instrument, is that ulceration and open cancer may follow. A correct diagnosis is therefore of vital importance before proceeding, in cases of strictured rectum, to the use of the bougie.

The first symptoms of scirrhus near the anus, frequently so much resemble those of simple stricture, that, unless the disease be within reach of the finger, it requires much experience, and great attention to the case, to decide on its nature. The age of the patient must never be overlooked

in such circumstances. When stricture arises in a man of the age of fifty, or in a woman of forty-five, we should be very cautious in resorting to dilatation.

In scirrhus, the local symptoms are generally more prominent than in the less serious disease. There is early felt a sensation of weight and fulness within the anus. There are shooting pains, and a great disposition to strain; and there are all the symptoms of intestinal irritation, which have been mentioned above as the concomitants of simple stricture,—only differing, in this more distressing malady, in being more easily referrible to the local disease as their cause. There is generally an ichorous secretion in the rectum, which exudes at the anus, and is often passed in greater quantity almost unconsciously with flatus.

As the scirrho-contraction usually extends over a greater portion of the gut than the simple stricture, the symptoms, when there is costiveness, are more decided: it is extremely difficult to procure evacuations; and they are often attended with excruciating pain.

If an examination take place before the disease has proceeded to the extent of implicating the coats of the gut, we find, though there may be a serious stricture, even extending over a considerable portion of the canal, that the mucous membrane is smooth and apparently healthy; the gut appears to be surrounded with hard lumps, and the finger advances with difficulty. When the disease has included the walls of the intestine, the canal is no longer to be recognized; the finger, if admitted, passes into a harsh irregular fissure, from which exudes a fetid ichor.

It must be recollected, that many of the most distressing symptoms of scirrhus, such as pain, distressing fulness, desire to strain, irregular harsh surface, and the ichorous discharge, may be produced by warts within the anus. These warts are generally found just within the sphincter, and may

be discovered to be moveable on the coats of the gut; while scirrhus either has its seat external to the gut, or is found to have become incorporated with it. Large soft and pendulous tumours also form immediately within the anus; but as the finger can distinguish their neck, they are, generally speaking, easily recognized.

The Symptoms of scirrho-contracted rectum then are,—

1. A feeling of fulness in the pelvic viscera, an inclination to strain, lancinating pains, constant uneasiness at the bottom of the rectum, and an obstruction to the passage of the feces, which, if passed figured, are small and flattened.

2. Much intestinal irritation, flatulency, irregularity of the bowels, and feculent accumulations, which may even go to the extent of causing symptoms of *iliac passion.*

3. Sympathetic soreness in the skin of the buttocks and back of the thighs,—in the scrotum, foreskin and glans penis.

4. Irregular constriction just within the sphincter ani, extending upwards, and found to be produced by disease external to the gut; the inner surface of which, in the earlier stages, is still smooth,—or the coats of the intestine, being included in the disease, have become ulcerated; and there are cancerous sores, and an excoriating discharge, within the canal.

Treatment.—This disease being cancerous, our chief object must be to keep back ulceration. The treatment is commenced by endeavouring to remove all causes of irritation having their source in functional derangement of the part, or in the chylopoetic organs. Though the patient may imagine that the bowels are free, there being regular daily motions, it will happen that a great accumulation exists; and it will be found that a quantity of *scybalæ*, like hard pressed clay, has been lodged above the strictured part, leaving a passage for the more fluid feces which have

been daily passed;* or undigested matter, the stones of fruit, a bone, or even vegetables, which the stomach, from the state of health, is unable to act on, having been obstructed by the diseased portion of the intestine, produce great suffering, and must be removed before we can hope to do good by any ulterior attempts at a cure. Hardened feces must be broken down and dissolved by glisters of warm water, so that they may pass the stricture without injury; and any foreign body must be removed by using, if necessary, forceps or a blunt hook.

The bowels must be kept loose; and it is advisable to add to the prescribed laxatives an anodyne. Castor oil with a few drops of laudanum, the lenitive electuary with sulphur and the extract of hyoscyamus, the compound powder of scammony and ipecacuan with opium, &c. may be given in moderate doses at bed-time; or purgatives may be prescribed with great advantage in the form of dinner-pills. I have found a combination of colocynth, ipecacuan, hyoscyamus, and gum mastiche, the most valuable in this shape. I have also seen blue-pill, ipecacuan, and hyosciamus, in various proportions, act most beneficially in cases in which it was necessary to produce daily soft stools. But it ought always to be remembered, that regularly repeated doses of mercury, however small, if persevered in for any length of time, are liable to produce serious constitutional injury.†

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* The accumulations of this description which may take place in cases of stricture, while the fluid feces are regularly passed, is well exemplified in Case CXVIII. of *Dr Abercrombie's Diseases of the Stomach.*

† I remember one case, where the quantity taken was under a grain of pil. hydrarg. daily, persevered in for a long period, which had the effect of entirely depriving the patient of the use of his wrists, and causing severe pain and swellings in other joints. He was restored to health by substituting a less noxious aperient.

I have never found the rectum at all irritated by small doses of aloes or colocynth, when used as the active ingredient of dinner-pill. The balsam of copaiba will also be found a most valuable medicine in many cases of disease in the verge of the anus. In large doses it acts as a laxative, and seems to improve the mucous secretion of the rectum.

In addition to the various laxatives usually prescribed in this disease, lavements may require to be administered daily. Tepid water will probably be sufficient, as the object is merely to dissolve the feces. And as it is advisable, before emptying the syringe, to pass the tube beyond the strictured portion of the gut, an elastic gum tube should be substituted for the usual pipe of the syringe.

If inflammatory symptoms should occur in the seat of disease, leeches and anodyne fomentations, antimonials, &c. must be resorted to, and as much rest given to the parts as possible. In severe cases, and when ulceration has supervened, it may be necessary to remove the feces by means of an elastic gum tube, which, being passed beyond the diseased portion of the gut, saves it from the irritation which the passage of the feces produces, when the ulcerated parts are not so protected from their contact. I have been able to accomplish this, where a more convenient instrument was not at hand, by unscrewing the syringe, and allowing the feces to pass through the pipe. The quantity of flatus which in this way escapes is often wonderful, to the great relief of the patient; as passing wind is, in cases of stricture, sometimes nearly as painful as a figured stool.

In cases of extensive ulceration in scirrhus of the rectum, it seems to be generally admitted, that the utmost we should attempt is to palliate: With this view we resort to anodyne medicines, gentle aperients, quieting glisters; endeavour to prevent irritation consequent to the passage of the feces; and use anodyne fomentations. Cicuta has been very ge-

nerally prescribed in cases of cancer. I should not, from what I have seen of its effects, expect much benefit from it administered internally. Perhaps it might prove more valuable in this disease if applied locally, combined with soap and opium in the form of suppository.

I am very much inclined, from what I have been able to effect in my own practice with iodine, and from what others have accomplished with it, to place much confidence in it as a remedy for scirrhus. Since I have resorted to the use of iodine for the removal of morbid growths, I have had no opportunity of prescribing it in the scirrho-contracted rectum; but I have found it act so much like a charm in hard indolent scrofulous swellings—in scirrhus mammæ—and in simple indurated tumours, that I should expect the best effects from its use in scirrhus of the rectum.

Although I have not found, except in one instance, any disagreeable symptoms follow the internal use of iodine, and have a case at present under my care, in which nearly half an ounce of the tincture was for some time taken daily, still I have found the local application of the medicine, by means of ointment, so effectual, that I do not in every case think it necessary to administer it internally.

In scirrhus of the rectum I should apply an ointment of the hydriodate of potash to the hardened portion of the gut, by means of the finger or metallic bougie, twice a-day, if possible using friction, but being of course careful to avoid any overstretching which might injure the diseased parts; or the iodine might be used combined with soap and opium as a suppository. And I should, in inveterate cases, administer this medicine internally, commencing with very small doses; for I should be inclined from experience to infer, that iodine is much more energetic in small doses than when swallowed in great quantities. In the case I have alluded to above —a case of scirrhus mammæ—when I was first consulted by

the patient, I found that she was swallowing three tea-spoonfuls, and sometimes more, daily, of the tincture, without any perceptible effect; and this she had been doing for some time. I reduced the dose to eight drops three times a-day, and the amendment, though gradual, has been more decided than under the larger doses.*

Should we be so fortunate as to succeed in allaying irritation and reducing the scirrhosity, an attempt should be carefully made to dilate the strictured gut with the bougie; and so proceed to treat it as a simple stricture.

The treatment of scirrho-contracted rectum then is,—

1. To empty the loaded bowels, with as little violence as possible, by a combination of laxative and anodyne medicines, and tepid glisters—removing any undigested or foreign substance which may have lodged above the stricture.

2. A daily aperient, combined, if needful, with an anodyne, and assisted by a glister of tepid water thrown up above the diseased portion of gut by an elastic gum tube, with which, in severe cases, the bowels may be evacuated; stuping the anus with anodyne fomentations.

3. Leeches to the verge of the anus, if there be much local irritation and fulness of habit, or inflammation.

4. Iodine locally, and if necessary internally.

5. Careful use of the metallic bougie.

In addition to these rules for local treatment, the utmost attention must be paid to the digestive organs; the diet

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* If the inference to which this case leads be admitted, it may in some degree account for the different opinions which have been formed of iodine. The large dose of the tincture which M. Magendie swallowed without bad effect, when he found that an equal quantity, given by mistake to a child, had been harmless, and produced no injury when administered to dogs, might lead to the conclusion that iodine in large doses is inert.

must be carefully regulated, avoiding the extremes—neither giving nourishment in too small a quantity, and of too exciting a nature, or of a description which, in order to give sufficient support to the patient, might require a quantity that would overload the bowels. Malt liquor I consider better than wine or spirits; but of course the quantity and nature of stimulating liquids must be regulated by the previous habits of the patient, and by the practitioner's experience of the effect of stimulants in the particular case.

In some cases, any kind of exercise may be out of the question; riding on horseback, and severe exercise of every description, is not to be permitted. If driving in a carriage be resorted to, a cushion must be made which will protect the diseased part from injury. I consider very moderate walking exercise the safest and best; but it unfortunately happens, that we have often to overcome a state of miserable restlessness—the patient cannot remain still, but is almost constantly walking to and fro, finding it impossible to sit longer than a few minutes at a time. Of course we cannot regulate the patient's exercise, until we have removed the nervous irritability from which this arises.

In addition to these strictures near the anus, the effect of disorganization, there is one of a spasmodic nature in the sphincter itself, or, more correctly, in the thickened muscular coat forming the inner sphincter, which occasions much uneasiness, and which, as being occasionally a cause of fistula, requires particular notice here. This stricture arises from a failure in the natural consent between this muscular ring and the other muscles engaged in evacuating the intestines. The consequence is, that instead of yielding to the passage of the feces, it opposes the other muscles, and produces all the symptoms of a permanent stricture; with this advantage, however, that the patient is at once

directed to the cause of the symptoms. Indeed, as this spasmodic obstruction is generally the effect of sores or tumours at the end of the gut, the patient has little doubt as to the seat of disease; but unfortunately the natural disinclination which most persons have to apply for advice, when disease is seated in these parts, and the dread of being exposed to an examination, often keeps the surgeon in ignorance of the disorganization which is in progress, until the more serious disease renders his assistance indispensable.

This spasmodic derangement, if not too long of being submitted to treatment, generally yields readily to the careful use of the bougie and attentive management of the bowels. But it may be necessary to remove the exciting cause by extirpating hæmorrhoidal tumours or warts, or to apply the solution of caustic or blue stone, or caustic or blue stone itself, to an ulcer. With a view to allay spasmodic action, it may be advisable, in some cases, to divide the sphincter ani.

Leeches are very useful in beginning the treatment in these cases, repeating them when necessary. Anodyne suppositories, fomentations, &c. may also be resorted to, according to the severity of the symptoms. I found ascarides in one case to be the cause of a spasmodic derangement of this description. Indeed I have reason to believe, that this species of worm often occasions disorders near the anus. A course of very small glisters, not more than half an ounce each in quantity, composed of camphor and olive oil, or of equal parts of olive oil and oil of turpentine, generally proves effectual in removing them.

FISTULA IN ANO.

Abscess and sinus at the verge of the anus have been generally called fistulæ, and in their various states have received different names—the false, the blind, the true fistula, &c. I think it would be more convenient were the term fistula applied only to the "true fistula." *Abscess* might then, in the diseases now under consideration, be used to denote the *blind fistula*; *sinus* the false one; while *fistula in ano* should be limited to that state of disease, in which there is *a diseased tube running from the rectum to the skin external to the anus*, the *true fistula* of authors.

Inflammation in those natural passages which are surrounded by cellular tissue, is extremely apt to produce a tendency to the suppurative process in that tissue. This is illustrated by the swellings and suppurations which arise in the perinœum in a diseased state of the urethra,* by the abscesses which form in the cheek in inflammation of the lachrymal duct, and by the effect of disorders in the rectum in producing disease at the anus.

This disposition to suppurative inflammation in the cellular membrane surrounding diseased canals, renders it of the utmost importance carefully to examine into the state of the rectum in every disease at the verge of the anus, and will sanction my classing together the diseases which form the subject of the present Essay.

In addition to the purely local causes which produce abscess in the cellular membrane and glandular structure at

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* A case which occurred to me early in practice illustrates this fact. In a case of severe gonorrhœa, an abscess formed in the cellular membrane external to the urethra, and the patient presented himself with a sinus of nearly half an inch in breadth, running along the whole length of the penis. It was cured by allowing a seton to remain in it for twelve hours.

the verge of the anus, it unfortunately happens, that disease of this part of the body sometimes gives the first token of great internal lesions; and abscess, sinus, and fistula in ano, are found to be only the forerunners or concomitants of pulmonary consumption or fatal abdominal disease.

Abscess at the verge of the anus.—This is generally the effect of irritation at the sphincter itself, or immediately within the anus. Pain and uneasiness will be followed by a flat hard tumour, of an inch or more in diameter, close to the anus, which after a time softens, breaks, and discharges ill-digested pus, followed by a sanious discharge, which on examination is found to proceed from a small hole with depressed lips, in the centre of a flattened portion of ill-coloured skin. The probe passes under the skin on every side, and it is well if there be no sinus running up along the gut. The skin engaged is generally thin. There are sometimes several openings.

I have never found any great benefit result, in these sluggish abscesses, from poulticing, injecting, &c. Laying the abscess freely open on both sides, and healing from the bottom, will be found, where the skin is in a wholesome state, the most certain means of curing the disease, and of saving the patient from unnecessary suffering. When there are more openings than one, and the skin is thin and diseased, it will be best to destroy the whole that is so implicated, with caustic, or to cut it away.

The general and after treatment is similar to the mode of treating the more serious disease of fistula.

Blind abscess.—When an abscess bursts above the sphincter, and discharges itself into the gut, what has been called a "blind fistula" is formed. This is a much more serious case, as, in order to its cure, it will usually be necessary to divide the sphincter, as in fistula. We shall have reason to suspect the existence of such an abscess, when, after pain and

uneasiness within the anus, the feces are reported to be streaked with blood and matter. If this be the consequence of a blind abscess, a hardened point will generally be found at the verge of the anus; and it may be possible to produce a flow of matter from the anus by pressing this spot. On examination, the finger will discover that there is a *boggy* portion within the anus, and it may even distinguish the opening of an abscess; or the existence of the disease may be proved by the rectum speculum.

It will generally, I fear, be necessary in this state of disease, to endeavour to pass the probe (having given it the necessary curve) into the abscess, and to make it point on the skin, so as to enable us to make an external opening, and to divide the sphincter ani at the proper point. It is however advisable to endeavour, by attention to the bowels, by glisters, fomentations, and the regular and cautious use of the bougie or candle, to overcome the irritation within the gut, which has most likely produced the disease, in hopes that we may in this way reach the abscess. It may even be possible to throw an injection into the sac of the abscess: And I on one occasion saw the late Mr John Bell succeed in destroying such an abscess, by introducing a paste of lunar caustic on lint within the sphincter. This, however, I consider so cruel an application, that I should not recommend it.

Sinus opening on the verge of the anus.—When an abscess external to the gut, instead of opening, as in the last instance, into the canal, points and bursts on the skin near the anus, a sinus or sinusses are formed, running from an inch to two inches parallel with the gut, causing much pain and suffering, discharging sanious matter, and having almost all the symptoms of a fistula.

The operation required for fistula in ano is usually looked on with so much horror, and is in truth so painful, that it must always be the duty of the surgeon to avoid it if

possible. Every attempt, therefore, is to be made to render the knife unnecessary, when as yet fistula has not been completed. It must be remembered, however, that the partition formed by the coats of the gut, between the cavity of the rectum and the sinus, is often so thin and diseased, that the common silver probe may, with very little force, be made to pass through it. In such a case it is best to consider the disease as fistula, and to treat it accordingly.

When the sinus is simple, and its walls not callous, and when the coats of the gut are not implicated in the disease, a cure without dividing the sphincter is possible; and it is always right to attempt it: But, at the same time, failures in this attempt are too common to justify the surgeon in being at all sanguine of success. He should therefore prepare the patient for the likelihood of his being ultimately forced to divide the sphincter ani.

In endeavouring thus to save our patient from the more serious operation, our first object must be to have the mouth of the sinus sufficiently large to admit of our reaching the bottom of it with any application that may be necessary; while we must, at the same time, try to allay irritation at the anus or within the gut. By means of red precipitate, sulphate of copper, and caustic, or by the knife, we shall accomplish the first; and by the attentions already prescribed for keeping the bowels under due regulation, and by the use of the candle or bougie, we are to endeavour to answer the second indication. We may then hope, by means of ointment of red precipitate, by injections of sulphate of copper, of zinc, or of caustic, and by touching the mouth of the sinus occasionally with caustic, to excite a healthy action from its fundus, or to produce adhesive inflammation throughout its course; and with a view to this last object, the excitement produced by a piece of sponge-tent left in the sinus for twelve hours, will sometimes prove effectual.

Fistula in ano.—There is no great risk of mistaking this very serious disease; and, limiting the term, as I have done, to what is generally called "true fistula," there is no difficulty in defining it. *It is a diseased communication from the rectum to the skin at the verge of the anus, external to the sphincter.* The surgeon is not generally permitted to examine, in cases of disease at the anus, until the patient becomes alarmed by a discharge of watery matter, continuing longer than he "expected after the bursting of a boil near the anus," when it will generally be found that there had been great irregularity in the state of the bowels—blood and matter may have been perceived on the feces—constant laxatives have been required to obviate the suffering occasioned by costiveness;—there may have been occasionally such severe suffering and extreme irritation about the anus, that the patient has been forced to sit for half an hour at a time over hot water;—a pain will, in particular, be described as if a lancet were suddenly forced deep into the fundament, sometimes so severe as to make the patient spring from his seat;—there have also been shivering fits, and the countenance is often that of a person labouring under some fatal organic disease.

On examination, there is found to be an unhealthy opening at the verge of the anus, from which can be squeezed sanious pus, air, and perhaps feculent matter; the probe passes upwards without difficulty; and when the finger is introduced into the anus, the probe may be found to have entered the gut.

It is not always easy thus to enter the gut with the probe, even when there is a communication: this may arise from the sinus running higher up than the inner opening, and the probe consequently passing it. But as it is very important to ascertain, if possible, the extent of the disease in the first examination, we ought not (should we have reason to be-

lieve the case to be one of fistula) to leave off, until we can say whether or not the communication really exists. By bending the probe, and passing carefully and repeatedly over the thin partition, it will generally enter the intestine.

Having satisfied ourselves that the disease is fistulous, and that the case is one fit for the use of the knife, the sooner the patient is made aware of the extent of his malady the better. Let us not forget, however, that such a disease of the anus is often only typical of a much more serious organic lesion; in which case, all the efforts of the surgeon will be sources of disappointment to himself, and of unnecessary suffering to a patient sinking under a mortal disease. Of such organic lesions, it is not at present my purpose to treat. It may be observed, however, that in such cases all that the surgeon can do is to allay local irritation, and to give free vent to matter during the medical treatment of the more formidable disease.

In considering fistula in ano with a view to its cure, the most prominent indication is to give rest to the parts. We have a sore in a part of the body which is almost in constant motion; for in addition to the natural action of the muscles surrounding the anus, in the performance of their various functions, the disease affects them spasmodically, so that the diseased part is allowed little or no rest. Partly, therefore, in order to answer this first indication, the sphincter ani is divided, by which means we relieve the sore in a great degree from the injurious effect of both spasmodic and functional motions, and are enabled to reach its bottom with our dressings.

There has been always a natural anxiety to contrive an operation which might render "cutting a fistula," as it is called, unnecessary; and various substitutes for the knife are in use. They are, however, tedious; and a great objection to them is, that, generally speaking, instead of allay-

ing irritation, they increase and keep up the injurious spasmodic action.

Gradually cutting through the gut, cellular substance, &c. which are involved in the disease, by means of a wire or ligature, is perhaps the best of the substitutes for the knife, and it has undoubtedly on many occasions effected a safe and perfect cure. It, however, unfortunately happens, that this operation sometimes occasions so much irritation as to bring on abdominal inflammation; and hence the ligature or wire cannot be safely resorted to except in cases in which, from the low state of the vascular action, various directions of sinusses, and extent of diseased integuments, we should fear to produce an unhealthy wound, so extensive as would follow the laying of the gut and fistula into one, or when the patient positively refuses to be operated on with the knife. It must be remembered, too, that after all the knife is required; for it is not advisable to allow the skin and sphincter to be divided by so slow and irritating a process as that of the wire or ligature, so that in the end the operation must be completed by the bistoury.

The operation with a ligature is simple enough. A ligature is prepared as if for a seton, and one end is passed into the fistula with the eyed probe, and brought out at the anus by the finger or forceps: the ends are then tied, care being taken to guard the verge of the anus from injury, by interposing lint or a pledget of cloth before tieing the ligature.

When the leaden wire is used, it may be necessary to introduce a canula to protect the upper part of the fistula from being injured more than is wished, and to make the bending of the wire more easy at the communication between the fistula and gut. Its ends projecting from the anus and fistula are then twisted, care being taken, as with

the ligature, to guard the verge of the anus from abrasion and ulceration.

The object in these operations is, that the ligature or wire should gradually cut its way out; and it is expected that the parts will heal behind it. The operation, as already mentioned, should be completed by dividing the sphincter with a bistoury.

Potential cautery is another of the substitutes for the knife; but it produces so much suffering, and is so tedious, that I should be unwilling to trust to it alone in any case of fistula. When the skin is in a very diseased state, and there are several openings, lunar caustic often proves most valuable in destroying unhealthy skin, and throwing the various openings into one.

The operation of "cutting a fistula," when there is only a single fistulous tube, is easily described. A probe-pointed bistoury is passed into the fistula, along a directory if necessary,—its point is received by the forefinger of the left hand, which has been passed into the rectum,—and the instrument is made to cut its way out; the finger, while assisting the bistoury in doing this, protecting the gut from farther injury. The cavity of the gut and the fistula are thus laid into one, and the sphincter ani is divided.

The patient in all these operations should have his body almost doubled, bending on a bed, while an assistant holds open his buttocks.

Of course, before proceeding to operate on these parts, the bowels must be completely emptied; and as it is an advantage, if possible, to give the parts two days' rest, we must endeavour to allay all irritation before commencing the operation. During the after-treatment, the bowels must be carefully regulated; and, if necessary, anodynes must be combined with the aperients.

The dressing.—This is perhaps the most important part of the operation. It must reach the bottom of the wound; and the great object is, that it should retain its position, which is difficult, because the natural action of the parts is to expel any body lodging, as the dressing must do, in the anus; and should we allow the wound to continue thus emptied, the newly cut edges would adhere, and every dressing would be, in effect, a severe operation, or the operation itself would become useless.

Lint, or linen oiled, or spread with simple ointment, or dry, is laid carefully into the wound, and made to reach its bottom, carefully avoiding overstuffing it, and a compress retained by the T bandage is applied. Dry dressing, by adhering to the raw sides of the wound, has the advantage of retaining its place more certainly than when ointments are used. But for the same reason it is extremely difficult to remove it, until suppuration is established; and it may do harm, by obstructing the passage of matter from the bottom of the wound.

I have seen cases, in which, from the degree of hemorrhage, it was necessary to introduce a piece of dry sponge into the wound. Styptic solutions on lint are better. A sponge causes great irritation; and by becoming almost incorporated with the wound, requires much time for its removal, which is a most painful process.

Dressings of simple cerate, carefully laid twice a-day to the bottom of the wound, will often be all that is required to complete the cure. But we must, at the same time, be prepared, as with other sores, to find a change of dressing called for; and the loose tissue about the anus is very apt to fall into a state of low inflammation, in which it is extremely difficult to induce a healthy suppurative process. It may therefore become necessary to resort to stimulating injections, exciting ointment, &c.

During the treatment, and when the fistula is cured, much attention must be paid to the rectum. There may be soft tumours or warty excrescences to remove, or sores at the end of the gut to heal, or the bougie or candle may be required to overcome a stricture.

In the more complicated cases of fistulous disease near the anus, we cannot hope to effect a cure by one simple operation; repeated cuttings may be required: we may have to lay two or more sinusses into one wound, or we may be forced to resort to the ligature, the knife, and caustic, in the same case. It may even become a question, though there should be no apparent connexion with great organic disease, whether, to use an expressive term, from *the rotten* state of the whole verge of the anus, it would be safe to do more than palliate. It seldom happens, however, that, in severe complicated cases, there is not a connexion with some great constitutional disease, which will render all the efforts of the surgeon abortive. It is also to be remembered, that lumbar abscess and other deep-seated suppurations, sometimes point on the verge of the anus, and may be mistaken for fistula. Suppurations of the prostate may also burst near the anus, so as to cause a very complicated and difficult case, requiring much judgment on the part of the surgeon, who must, in all these cases, avoid being hurried into operations.

In reference to diseases of this class, in a general view, it is proper to consider how far the occupations of individuals, or the habits of society, may affect the parts surrounding the lower end of the rectum. The European mode of sitting, our numerous sedentary employments, and general want of cleanliness, render us more liable to diseases near the anus, than under different circumstances in these respects we probably should be; while luxurious living and indigestible diet, by overtasking the stomach, allow un-

changed ingesta or condiments to pass on and become sources of serious derangements in the functions of the rectum.

In India, sedentary habits are much more common with the natives than in this country, and condiments are in daily use, which, with many Europeans, produce excessive irritation in the rectum. Yet, in the course of upwards of eight years' practice in that country, during most of which time many thousands of natives had a right to my professional services, and I was consulted in almost every serious case that occurred in my neighbourhood, no case of fistula in ano in a native of India was ever brought to me. Judging from this, and finding that the experience of other medical men, who have been similarly situated, leads to the same conclusion, I should say, serious disease of the anus is rare among the Hindoos. Of course many things may contribute to this immunity; but making every allowance for the difference of diet, much, I think, must still be ascribed to their posture in sitting, and to their religious cleanliness.*

There is another of the Hindoo's peculiar habits, which may have some effect in exempting them from disease of the rectum and anus. Those who are able to live high, indeed it is very common with all ranks, are in the habit of getting rid of any undigested matter which may remain in the stomach after their night's rest, by inducing vomiting before breakfast; by which means they of course eject what might otherwise, by being forced through the alimentary

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* A native of Hindostan either sits on his heels like a monkey, or with his feet beneath his buttocks like a tailor; in both of which positions the anus and perinœum are saved from pressure. And even the lowest casts most religiously adhere to the rule of washing after stool.

canal in an undigested state, prove a source of derangement at its lower extremity.

But without attempting to theorize on the national peculiarities to which I have just adverted, it may be asserted with great safety, that, in all cases of disease of the rectum and anus, much is to be accomplished by skilful management of the general health. The chylopoetic organs require unremitting attention; and the surgeon will receive the greatest assistance from alteratives and tonics, while he will often be under the necessity of enforcing a change of air to complete the cure. Indeed, I am not aware of any class of diseases which more strikingly illustrate the advantage of that salutary union of Medical and Surgical Science, which the Royal College of Surgeons of Edinburgh requires in its Members.

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